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1 [A structured approach for the definition of the semantics of active database](#)

Piero Fraternali, Letizia Tanca

December 1995 **ACM Transactions on Database Systems (TODS)**, Vol

**Publisher:** ACM Press

Full text available: [pdf\(4.15 MB\)](#) Additional Information: [full citation](#), [abst](#)  
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Active DBMSs couple database technology with rule-based programmin  
capability of reaction to database (and possibly external) stimuli, called e  
capabilities of active databases are useful for a wide spectrum of applica  
security, view materialization, integrity checking and enforcement, or he  
database integration, which makes this technology very promising for the  
active database system consists of ...

**Keywords:** active database systems, database rule processing, events, fir  
rules, semantics

2 [An overview of the University of Texas at Dallas' center for advanced telec](#)  
 [systems and services \(CATSS\)](#)

Imrich Chlamtac, Stefano Basagni, Stephen Gibbs

April 2000 **ACM SIGMOBILE Mobile Computing and Communication**  
4 Issue 2

**Publisher:** ACM Press

Full text available:  [pdf\(816.71 KB\)](#) Additional Information: [full citation](#), [abstract](#)

The University of Texas at Dallas' Center for Advanced Telecommunications Services (CATSS) was founded in January 1998 to satisfy the acute need of the Dallas/Richardson telecommunications industry. Its mission is to foster a University partnership to advance local telecommunications industries to the development of systems and products. Composed of UTD faculty and industry researchers, the Center's focus is exclusively telecommunications-related ...


3 [Flexible collaboration transparency: supporting worker independence in re-sharing systems](#)



James Begole, Mary Beth Rosson, Clifford A. Shaffer

June 1999 **ACM Transactions on Computer-Human Interaction (TOCHI)**  
Issue 2

**Publisher:** ACM Press

Full text available:  [pdf\(312.22 KB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

This article presents a critique of conventional collaboration transparency called "application-sharing" systems, which provide the real-time shared single-user applications. We find that conventional collaboration transparency is inefficient in their use of network resources and lack support for key group concurrent work, relaxed WYSIWIS, and group awareness. Next, we present an approach to implementing collaborative work ...

**Keywords:** Flexible JAMM, Java, application sharing, collaboration transparency, computer-supported cooperative work, groupware, usability


4 [Type-directed partial evaluation](#)



Olivier Danvy

January 1996 **Proceedings of the 23rd ACM SIGPLAN-SIGACT symposium on programming languages POPL '96**

**Publisher:** ACM Press


Full text available:  pdf(1.59 MB) Additional Information: [full citation](#), [reference terms](#)

5 A layered protocol architecture for multimedia wireless-PCS networks

Antonio Iera, Salvatore Marano, Antonella Molinaro

June 1998 **Mobile Networks and Applications**, Volume 3 Issue 1

**Publisher:** Kluwer Academic Publishers

Full text available:  pdf(575.41 KB) Additional Information: [full citation](#), [abstracts](#), [index terms](#)


Coupled with the growing interest in the Universal Mobile Telecommunications (UMTS) as a standard for future mobile communications, the need for an effectively support multimedia teleservices in such an environment is also Starting from the idea that multimedia means the integrated manipulation of information and hence the independent handling of separate information an enhanced protocol architecture for the support of multimedia ...

6 A synchronization model for recorded presentations and its relevance for interactive

 W. Hürst, R. Müller


October 1999 **Proceedings of the seventh ACM international conference on Document Analysis and Recognition (Part 1)**

**Publisher:** ACM Press

Full text available:  pdf(1.84 MB) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


In order to improve the acceptance of recorded presentations, we introduce a document type covering a wide range of different media classes typically encountered in a multimedia presentation scenario. Instances of this document type can be replayed using our time synchronization model. Random access in combination with the realized layered synchronization mechanism results in essential features such as fast navigation, scrolling and unrestricted cross-referencing ...

7 Software process modeling and execution within virtual environments

 John C. Doppke, Dennis Heimbigner, Alexander L. Wolf

January 1998 **ACM Transactions on Software Engineering and Methodology**, Volume 7 Issue 1


**Publisher:** ACM Press

Full text available:  [pdf\(232.51 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

In the past, multiuser virtual environments have been developed as venues for social interaction. Recent research focuses instead on their utility in the real world. This research has identified the importance of a mapping between the real and the virtual that permits the representation of real tasks in the virtual environment. We investigate the use of virtual environments—in particular, MUDs (Multi-Dimensions)—in the domain of software development.


**Keywords:** MOO, MUD, PROMO, software process, tools, virtual environments

8 [The DiveBone—an application-level network architecture for Internet-based virtual environments](#)

 Emmanuel Frécon, Chris Greenhalgh, Mårten Stenius

December 1999 **Proceedings of the ACM symposium on Virtual reality technology**

**Publisher:** ACM Press

Full text available:  [pdf\(1.82 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

To allow the number of simultaneous participants and applications to grow, Collaborative Virtual Environment (CVE) platforms are combining ideas of consistency, absence of central servers and world sub-partitioning with Internet long distance connections, most of these systems rely on the existence of a multicast backbone - the MBone. However, its generality and complexity are an obstacle to the establishment and testing of large-scale CVEs. This ...


**Keywords:** CVE, Dive, MBone, VR, multi-user, multicast, network architecture

9 [Specification and dialogue control of visual interaction through visual rewriting](#)

 P. Bottoni, M. F. Costabile, P. Mussio

November 1999 **ACM Transactions on Programming Languages and Systems (TOPLAS)**, Volume 21 Issue 6

**Publisher:** ACM Press

Full text available:  [pdf\(886.71 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

Computers are increasingly being seen not only as computing tools but n communication tools, thus placing special emphasis on human-computer In this article, the focus is on visual HCI, where the messages exchanged and computer are images appearing on the computer screen, as usual in c interfaces. We formalize interactive sessions of a human-computer dialo set of legal visual sentences, i.e., as a visual languag ...


**Keywords:** control automaton, dialogue control, visual languages

**10** Using Java to implement a multimedia annotation environment for young c

◆ Afrodite Sevasti, Bouras Christos

October 2000 **Proceedings of the eighth ACM international conference**

**Publisher:** ACM Press

Full text available:  [pdf\(796.37 KB\)](#) Additional Information: [full citation](#), [abst](#)  
[index terms](#)

The exceptional advent and dominance of interactive multimedia applica has led to the need for their exploitation for educational, among many of this work, we present the design and implementation of a multimedia an environment for young children using the Java 2 Platform. This environr to provide children of ages 4 to 8 with the opportunity to reflect upon an from their everyday life.

Our aim was to exploit ...

**Keywords:** Java, hypermedia interface, interactive multimedia, media in synchronization, video annotation, video browsing

**11** Applications: Wide-area information access to multimedia historical source

◆ Tim Mills, Ken Moody

September 1996 **Proceedings of the 7th workshop on ACM SIGOPS Eu Systems support for worldwide applications**

**Publisher:** ACM Press

Full text available:  [pdf\(713.74 KB\)](#) Additional Information: [full citation](#), [abst](#)

An object-oriented model has been developed for heterogeneous multimi


model underlies Cobra, a content-based retrieval architecture, which allows construction of powerful tools for wide area information access. The system was evaluated through case studies, the first of which is a search engine for h

**12** SCAAT: incremental tracking with incomplete information

◆ Greg Welch, Gary Bishop

August 1997 **Proceedings of the 24th annual conference on Computer graphics and interactive techniques**

**Publisher:** ACM Press/Addison-Wesley Publishing Co.


Full text available:  [pdf\(104.69 KB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)

**Keywords:** Kalman filter, autocalibration, calibration, delay, feature tracking, sensor fusion, virtual environments tracking

**13** Software architecture of ubiquitous scientific computing environments for  
Tzvetan T. Drashansky, Sanjiva Weerawarana, Anupam Joshi, Ranjeewa A. Elias N. Houstis

December 1996 **Mobile Networks and Applications**, Volume 1 Issue 4

**Publisher:** Kluwer Academic Publishers

Full text available:  [pdf\(363.10 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)



Recent and anticipated technological advances in wireless computing will allow us to compute ubiquitously, “anywhere” and “any time”. However, mobile platforms do not have the computational resources to solve even moderately complex problems that can be routinely solved on static workstations today. In the SciencePad project on “Ubiquitous” Problem Solving Environments (UPSEs) to support mobile computing, we are developing a system to support mobile computing. The objectives ...

**14** Special issue on natural language generation: Describing complex charts in  
caption generation system

Vibhu O. Mittal, Giuseppe Carenini, Johanna D. Moore, Steven Roth


September 1998 **Computational Linguistics**, Volume 24 Issue 3

**Publisher:** MIT Press

Full text available:  [pdf\(2.58 MB\)](#)  Additional Information: [full citation](#), [abstracts](#)  
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Graphical presentations can be used to communicate information in relatively succinctly and effectively. However, novel graphical presentations that represent attributes and relationships are often difficult to understand completely. Automatically generated graphical presentations must therefore either be generating simple, conventionalized graphical presentations, or risk an impossible solution to this problem would be to extend automatic ...

**15** Comparative logical and physical modeling in two OODBMSs

 Nancy K. Wiegand, Teresa M. Adams

September 1994 **ACM SIGAPP Applied Computing Review**, Volume 2

**Publisher:** ACM Press

Full text available:  [pdf\(553.69 KB\)](#) Additional Information: [full citation](#), [abstracts](#)

An application developer's perspective is used to compare modeling and Object-Oriented Database Management Systems (OODBMSs): ODE (Object Environment) and ObjectStore. Although both systems are based on the language C++, differences exist in their OODBMS designs. Comparing them between these two systems provides insight into other possible designs or features that could be possible in an OODBMS. As part of this discussion


**Keywords:** application development, database management systems, logic design, object-oriented database management systems, physical database

**16** An object-oriented model for a multimedia patient folder management system

 Fernando Ferri, Domenico M. Pisanelli, Fabrizio L. Ricci

April 1996 **ACM SIGBIO Newsletter**, Volume 16 Issue 1

**Publisher:** ACM Press

Full text available:  [pdf\(1.32 MB\)](#) Additional Information: [full citation](#), [abstracts](#)

The management of information related to clinical activities is a complex patient related information reported in patient folders comes from heterogeneous

and may be rendered by means of different modalities. Data can originate from observations made by physicians like in the case of objective examination of physiologic phenomena are captured by means of the involved electrical case of heart or brain activity), whereas anatomical s ...


**Keywords:** data modelling, object-oriented modelling, patient folder

**17** An approach to the formal verification of cryptographic protocols

◆ Dominique Bolignano

January 1996 **Proceedings of the 3rd ACM conference on Computer and security**

**Publisher:** ACM Press


Full text available:  pdf(1.85 MB) Additional Information: [full citation](#), [reference](#), [index terms](#)

**18** A modular approach to the design and analysis of authentication and key exchange (extended abstract)

◆ Mihir Bellare, Ran Canetti, Hugo Krawczyk

May 1998 **Proceedings of the thirtieth annual ACM symposium on Theory of computing**

**Publisher:** ACM Press


Full text available:  pdf(1.61 MB) Additional Information: [full citation](#), [reference](#), [index terms](#)

**19** Functionality and architecture of a cooperative database system: a vision

◆ Thomas Kirsche, Richard Lenz, Hans Schuster

November 1994 **Proceedings of the third international conference on Information knowledge management**

**Publisher:** ACM Press

Full text available:  pdf(857.55 KB) Additional Information: [full citation](#), [abstract](#), [index terms](#)

A database system fostering the cooperative usage and modification of a database should provide standard database functionality (e.g. application-independent criteria and data modelling) plus means for a step-wise, cooperative refinement




a long period of time. Key ingredients are a hierarchical organization of model covering cooperative uncertainty, and support for long-living cooperation. Furthermore, mechanisms for data passing ...

**20** Finite-state multimodal parsing and understanding

Michael Johnston, Srinivas Bangalore

July 2000 **Proceedings of the 18th conference on Computational linguistics**

**Publisher:** Association for Computational Linguistics

Full text available:  [pdf\(594.55 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#)




Multimodal interfaces require effective parsing and understanding of utterance content which is distributed across multiple input modes. Johnston 1998 presents which strategies for multimodal integration are stated declaratively using a grammar that is used by a multi-dimensional chart parser to compose input. This is highly expressive and supports a broad class of interfaces, but offers opportunities for mutual compensation among the input modalities ...

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1 [Exokernel: an operating system architecture for application-level resource](#)

D. R. Engler, M. F. Kaashoek, J. O'Toole

December 1995 **ACM SIGOPS Operating Systems Review , Proceeding  
ACM symposium on Operating systems principles SOS  
Issue 5**

**Publisher:** ACM Press

Full text available: [pdf\(2.16 MB\)](#)

Additional Information: [full citation](#), [refe](#)  
[index terms](#)

2 [ATM Architectures Using Optical Technology: An Overview of Switching Multiplexing](#)

M. Guizani

July 1997 **International Journal of Network Management, Volume 7 Is**

**Publisher:** John Wiley & Sons, Inc.

Full text available: [pdf\(525.89 KB\)](#) Additional Information: [full citation](#), [abst](#)  
[index terms](#)

This overview presents recent studies on photonic switches and discusse different types, such as space-division switches, free-space switches, tim wavelength division switches, and frequency division switches. The arch


applications of these switches are also discussed. © 1997 John Wiley &

3 Is paper safer? The role of paper flight strips in air traffic control

◆ Wendy E. MacKay

December 1999 **ACM Transactions on Computer-Human Interaction** (6 Issue 4

**Publisher:** ACM Press

Full text available:  [pdf\(1.13 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

Air traffic control is a complex, safety-critical activity, with well-established work practices. Yet many attempts to automate the existing system have controllers remain attached to a key work artifact: the paper flight strip. This article describes a four-month intensive study of a team of Paris en-route controllers to understand their use of paper flight strips. The article also describes a comparison of eight different control rooms in France ...



**Keywords:** activity theory, affordances, air traffic control, annotation, error, paper flight strips, peripheral awareness, safety factors

4 Conference review

◆ Paul Mc Kevitt, Conn Mulvihill, Seán Ó Nualláin

September 2000 **intelligence**, Volume 11 Issue 3

**Publisher:** ACM Press


Full text available:  [pdf\(571.47 KB\)](#)  [html \(52.05 KB\)](#) Additional Information: [full citation](#), [references](#)

5 Using nonspeech sounds to provide navigation cues

◆ Stephen A. Brewster

September 1998 **ACM Transactions on Computer-Human Interaction** (5 Issue 3


**Publisher:** ACM Press

Full text available:  [pdf\(298.94 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)

This article describes 3 experiments that investigate the possibility of using nonspeech audio messages called earcons to provide navigational cues in a hierarchy of 27 nodes and 4 levels was created with an earcon for each node. Participants defined for the creation of hierarchical earcons at each node. Participants showed their location in the hierarchy by listening to an earcon. Results of the first experiment showed that participants could ...


**Keywords:** auditory interfaces, earcons, navigation, nonspeech audio, text interfaces

6 Towards intelligent recognition of multimedia episodes in real-time applications

 J. Gabbe, A. Ginsberg, B. Robinson

October 1994 **Proceedings of the second ACM international conference**

**Publisher:** ACM Press

Full text available:  [pdf\(999.61 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


The ability to automatically capture and index multimedia information for review is critical to the success of future multimedia services. In this paper we describe a technique to automatically generate indexes of real-time streams without requiring complex analysis. Our techniques involve segmenting continuous audio and video streams and relating these to discrete events from the multimedia application, such as user interactions, control events, and data content ...

7 A synchronization model for recorded presentations and its relevance for interactive presentations

 W. Hürst, R. Müller

October 1999 **Proceedings of the seventh ACM international conference on Multimedia**  
(Part 1)

**Publisher:** ACM Press

Full text available:  [pdf\(1.84 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


In order to improve the acceptance of recorded presentations, we introduce a new document type covering a wide range of different media classes typically found in a multimedia presentation scenario. Instances of this document type can be replayed using our time synchronization model. Random access in combination with the realized layered synchronization mechanism results in essential features such as fast navigation, scrolling and unrestricted cross-referencing ...

8 SimTutor: a multimedia intelligent tutoring system for simulation modeling

◆ Tajudeen A. Atolagbe, Vlatka Hlupic

December 1997 **Proceedings of the 29th conference on Winter simulation**

**Publisher:** ACM Press



Full text available:  pdf(612.63 KB) Additional Information: [full citation](#), [reference](#)

9 Special issue on natural language generation: Describing complex charts in caption generation system

Vibhu O. Mittal, Giuseppe Carenini, Johanna D. Moore, Steven Roth

September 1998 **Computational Linguistics**, Volume 24 Issue 3

**Publisher:** MIT Press

Full text available:  pdf(2.58 MB)  Additional Information: [full citation](#), [abstracts](#)  
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Graphical presentations can be used to communicate information in relatively succinctly and effectively. However, novel graphical presentations that represent attributes and relationships are often difficult to understand completely. Automatically generated graphical presentations must therefore either be generating simple, conventionalized graphical presentations, or risk incoherent. A possible solution to this problem would be to extend automatic generation of graphical presentations to include the generation of more complex graphical presentations.

10 Reinventing the familiar: exploring an augmented reality design space for interactive systems

◆ Wendy E. Mackay, Anne-Laure Fayard, Laurent Frobert, Lionel Médini

January 1998 **Proceedings of the SIGCHI conference on Human factors in computing systems**

**Publisher:** ACM Press/Addison-Wesley Publishing Co.

Full text available:  pdf(1.14 MB) Additional Information: [full citation](#), [reference](#), [index terms](#)



**Keywords:** augmented reality, design space, interactive paper, participatory prototyping

**11** Intrusion detection systems and multisensor data fusion

◆ Tim Bass

April 2000 **Communications of the ACM**, Volume 43 Issue 4

**Publisher:** ACM Press

Full text available:  [pdf\(99.81 KB\)](#)  [html \(34.77 KB\)](#)

Additional Information: [full citation](#), [reference](#), [index terms](#)

**12** A human's eye view: motion blur and frameless rendering

◆ Ellen J. Scher Zagier

May 1997 **Crossroads**, Volume 3 Issue 4

**Publisher:** ACM Press

Full text available:  [html\(61.89 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)


Frameless Rendering (FR) is a rendering paradigm which performs stock filtering by updating pixels in a random order, based on most recent available data, before displaying them to the screen immediately [1]. This is a departure from traditional approaches commonly experienced in interactive graphics. A typical interactive session uses a single input state to compute an entire frame. This constraint is not known at the time the first pixel's value is computed. ...

**13** ENO: synthesizing structured sound spaces

◆ Michel Beaudouin-Lafon, William W. Gavett

November 1994 **Proceedings of the 7th annual ACM symposium on Use of computers in software and technology**

**Publisher:** ACM Press

Full text available:  [pdf\(1.02 MB\)](#)

Additional Information: [full citation](#), [abstracts](#), [index terms](#)

ENO is an audio server designed to make it easy for applications in the user interface to incorporate non-speech audio cues. At the physical level, ENO manages the audio hardware. At the logical level, it manages a sound space for various client applications. Instead of dealing with sound in terms of its samples (i.e., sampled sounds), ENO allows sounds to be presented and controlled in terms of their spatial location.

level descriptions of sources, int ...

**Keywords:** auditory interfaces, client-server architecture, multimodal in audio, sound

14 Interactive information retrieval systems: from user centered interface design



P. Mulhem, L. Nigay

August 1996 **Proceedings of the 19th annual international ACM SIGIR Research and development in information retrieval**

**Publisher:** ACM Press

Full text available: pdf(1.48 MB) Additional Information: [full citation](#), [reference terms](#)

15 Data and knowledge base research at Hong Kong University of Science and Technology



P. Drew, B. Hamidzadeh, K. Karlapalem, A. Kean, D. Lee, Q. Li, F. Locher, B. Wuthrich

December 1995 **ACM SIGMOD Record**, Volume 24 Issue 4

**Publisher:** ACM Press

Full text available: pdf(556.13 KB) Additional Information: [full citation](#), [abstract](#)

The National Technical University of Athens (NTUA) is the leading Technical University in Greece. The Computer Science Division of the Electrical and Computer Engineering Department covers several fields of practical, theoretical and technical computer science and is involved in several research projects supported by the EEC, the government and private companies. The Knowledge and Data Base Systems (KDBS) Laboratory was established in 1992 at the National Technical University ...

16 Finite-state multimodal parsing and understanding

Michael Johnston, Srinivas Bangalore

July 2000 **Proceedings of the 18th conference on Computational linguistics**

**Publisher:** Association for Computational Linguistics

Full text available: pdf(594.55 KB) Additional Information: [full citation](#), [abstracts and citations](#)


Multimodal interfaces require effective parsing and understanding of utterance content is distributed across multiple input modes. Johnston 1998 presents which strategies for multimodal integration are stated declaratively using a grammar that is used by a multi-dimensional chart parser to compose input is highly expressive and supports a broad class of interfaces, but offers options for mutual compensation among the input modes ...

**17 Collaborative virtual environment: Advanced real-time collaboration over 1**

◆ Chris Joslin, Tom Molet, Nadia Magnenat-Thalmann

October 2000 **Proceedings of the ACM symposium on Virtual reality software technology**

**Publisher:** ACM Press

Full text available:  [pdf\(1.48 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#)

In this paper we present our Networked Virtual Environment (NVE) System VLNET (Windows Virtual Life Network), which has been developed on an Operating System (OS). This paper emphasizes the Real-Time aspect of the advanced interactivity that the system provides and its ability to transmit over the Internet so that geographically distant users can collaborate with each other. Topics include communication, scene management, ...


**Keywords:** Advanced Interaction, Distance Collaboration, Motion Tracking, Virtual Environment, Networks, Real-Time Interactions

**18 Logic programming with the World-Wide Web**

◆ Seng Wai Loke, Andrew Davison

March 1996 **Proceedings of the the seventh ACM conference on Hypertext**

**Publisher:** ACM Press

Full text available:  [pdf\(1.97 MB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** World-Wide Web, common client interface, mobile code, mobile structured logic programming




**19** Using code mobility to create ubiquitous and active augmented reality in m

◆ Kari Kangas, Juha Rönning

August 1999 **Proceedings of the 5th annual ACM/IEEE international c**  
**Mobile computing and networking**

**Publisher:** ACM Press




Full text available:  [pdf\(1.35 MB\)](#) Additional Information: [full citation](#), [reference](#), [index terms](#)

**Keywords:** augmented reality, mobile code, mobile computing, ubiquito

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1 [Network support for mobile multimedia using a self-adaptive distributed p](#)

Zhuoqing Morley Mao, Hoi-sheung Wilson So, Byunghoon Kang

January 2001 **Proceedings of the 11th international workshop on Netwo**  
**systems support for digital audio and video**

**Publisher:** ACM Press

Full text available: [pdf\(212.65 KB\)](#) Additional Information: [full citation](#), [abst](#)  
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Recent advancements in video and audio codec technologies~(e.g., Real  
multimedia streaming possible across a wide range of network condition  
increasing trend of ubiquitous connectivity, more and more areas have o  
of multiple wired and wireless networks. Because the best network servi  
user moves, to provide good multimedia application performance, the se  
to user movement as well as network and computational res ...

2 [The transport layer: tutorial and survey](#)

Sami Iren, Paul D. Amer, Phillip T. Conrad

December 1999 **ACM Computing Surveys (CSUR)**, Volume 31 Issue 4

**Publisher:** ACM Press

Full text available: [pdf\(261.78 KB\)](#) Additional Information: [full citation](#), [abst](#)

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citings, index ter

Transport layer protocols provide for end-to-end communication between  
This paper presents a tutorial on transport layer concepts and terminology  
transport layer services and protocols. The transport layer protocol TCP  
reference point, and compared and contrasted with nineteen other protocols  
the past two decades. The service and protocol features of twelve of the  
protocols are summarized in both text and tables.<...


**Keywords:** TCP/IP networks, congestion control, flow control, transport service

**3** BlueSky: a cordless networking solution for palmtop computers

◆ Pravin Bhagwat, Ibrahim Korpeoglu, Chatschik Bisdikian, Mahmoud Nagl  
Tripathi

August 1999 **Proceedings of the 5th annual ACM/IEEE international conference on Mobile computing and networking**

**Publisher:** ACM Press

Full text available:  pdf(1.31 MB)


Additional Information: full citation, reference

**4** Supporting CORBA applications in a mobile environment

◆ Mads Haahr, Raymond Cunningham, Vinny Cahill

August 1999 **Proceedings of the 5th annual ACM/IEEE international conference on Mobile computing and networking**

**Publisher:** ACM Press

Full text available:  pdf(1.42 MB)


Additional Information: full citation, reference, index terms

**5** Software engineering for mobility: a roadmap

◆ Gruia-Catalin Roman, Gian Pietro Picco, Amy L. Murphy

May 2000 **Proceedings of the Conference on The Future of Software Engineering**

**Publisher:** ACM Press

Full text available:  pdf(2.07 MB)

Additional Information: full citation, reference

MB)


index terms

6 A preservation-based multicast (RBM) routing protocol for mobile network construction phase

M. Scott Corson, Stephen G. Batsell

December 1995 **Wireless Networks**, Volume 1 Issue 4

**Publisher:** Kluwer Academic Publishers

Full text available:  [pdf\(2.06 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#)

We propose a combined multicast routing, resource reservation and admission control protocol, termed Reservation-Based Multicast (RBM), that borrows the ‘Point-to-Point’ or ‘Core’ concept from multicast routing algorithms proposed for mobile networks and routes hierarchical streams based on user-specified fidelity requirements, real-time delivery requirements and prevailing network bandwidth constraints ...


7 Collaborative augmented reality environments: integrating VR, working in distributed work spaces



Monika Büscher, Michael Christensen, Kaj Grønbaek, Peter Krogh, Preben Shapiro, Peter Ørbæk

September 2000 **Proceedings of the third international conference on Collaborative virtual environments**


**Publisher:** ACM Press

Full text available:  [pdf\(1.03 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


In this work, we present a new method for displaying stereo scenes, which reduces the rendering time of complex geometry. We first discuss a scene splitting strategy to partition objects to the distant background or the near foreground. Finally, we propose a computation rule for positioning a cutting plane in the scene.

**Keywords:** 3D workspace, CSCW, roomware, virtual office/project room, virtual working material


8 Risks to the public in computers and related systems

- ◆ July 1997 **ACM SIGSOFT Software Engineering Notes**, Volume 22 Iss  
**Publisher:** ACM Press  
Full text available:  pdf(946.41 KB) Additional Information: [full citation](#), [index terms](#)


9 Dynamic network reconfiguration support for mobile computers

- ◆ Jon Inouye, Jim Binkley, Jonathan Walpole  
September 1997 **Proceedings of the 3rd annual ACM/IEEE international conference on Mobile computing and networking**  
**Publisher:** ACM Press  
Full text available:  pdf(1.60 MB) Additional Information: [full citation](#), [reference terms](#)

10 A QoS adaptive transport system: design, implementation and experience

- ◆ Andrew Campbell, Geoff Coulson  
February 1997 **Proceedings of the fourth ACM international conference on Mobile computing and networking**  
**Publisher:** ACM Press  
Full text available:  pdf(1.29 MB) Additional Information: [full citation](#), [reference terms](#)

11 Client-server computing in mobile environments

- ◆ Jin Jing, Abdelsalam Sumi Helal, Ahmed Elmagarmid  
June 1999 **ACM Computing Surveys (CSUR)**, Volume 31 Issue 2  
**Publisher:** ACM Press  
Full text available:  pdf(233.31 KB) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

Recent advances in wireless data networking and portable information appliances have engendered a new paradigm of computing, called mobile computing, in which portable devices have access to data and information services regardless of their location or movement behavior. In the meantime, research addressing information services in mobile environments has proliferated. In this survey, we provide a concrete categorization of the various ways ...


**Keywords:** application adaptation, cache invalidation, caching, client/server dissemination, disconnected operation, mobile applications, mobile client computing, mobile data, mobility awareness, survey, system application

**12** MEDIATE: video as a first-order datatype

◆ Steinar Kristoffersen

November 1997 **Proceedings of the international ACM SIGGROUP conference on Supporting group work: the integration challenge**

**Publisher:** ACM Press

Full text available:  pdf(1.43 MB)

Additional Information: [full citation](#), [reference](#)


**Keywords:** CSCW, collaborative multimedia, groupware toolkits

**13** Level II technical support in a distributed computing environment

◆ Tim Leehane

September 1996 **Proceedings of the 24th annual ACM SIGUCCS conference on services**

**Publisher:** ACM Press

Full text available:  pdf(5.73 MB)


Additional Information: [full citation](#), [reference](#)

**14** Design considerations and tools for low-voltage digital system design

◆ Anantha Chandrakasan, Isabel Yang, Carlin Vieri, Dimitri Antoniadis


June 1996 **Proceedings of the 33rd annual conference on Design automation**

**Publisher:** ACM Press

Full text available:  pdf(139.97 KB)

Additional Information: [full citation](#), [reference](#), [index terms](#)


**15** A confederation of tools for capturing and accessing collaborative activity  
Scott Minneman, Steve Harrison, Bill Janssen, Gordon Kurtenbach, Thomas

- ◆ Smith, Bill van Melle  
January 1995 **Proceedings of the third ACM international conference on**  
**Publisher:** ACM Press  
Full text available:  [htm\(73.96 KB\)](#) Additional Information: [full citation](#), [reference terms](#)

**Keywords:** CSCW, activity capture, content-and content-based indexing digital audio and video, distributed multimedia systems, real-time indexing interfaces

- 16 The interactive performance of SLIM: a stateless, thin-client architecture  
◆ Brian K. Schmidt, Monica S. Lam, J. Duane Northcutt  
December 1999 **ACM SIGOPS Operating Systems Review , Proceedings  
seventeenth ACM symposium on Operating systems principles**  
Volume 33 Issue 5


**Publisher:** ACM Press

Full text available:  [pdf\(1.79 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

Taking the concept of thin clients to the limit, this paper proposes that desktops should just be simple, stateless I/O devices (display, keyboard, mouse, etc.) sharing a shared pool of computational resources over a dedicated interconnection network the same way as a building's telephone services are accessed by a collection of devices. The stateless desktop design provides a useful mobility model in which users can transparently resume their work on any desktop computer ...

- 17 Communication control in computer supported cooperative work systems  
◆ Robert Simon, Robert Sciabassi, Taieb Znati  
October 1994 **Proceedings of the 1994 ACM conference on Computer supported  
cooperative work**

**Publisher:** ACM Press

Full text available:  [pdf\(1.22 MB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

This paper presents AlphaDeltaPhi-groups (ADP-group) as a communication connection level management in distributed CSCW systems. In order to


CSCW communication patterns, an ADP-group is a related set of cooper whose communication is supported by allowing a spectrum of quality-of delivery reliability, atomicity and causal ordering options to co-exist wit ADP-group communication provides appropriate connection manage ...

**Keywords:** CSCW, group communication, multimedia, network connect

**18** Using channel state dependent packet scheduling to improve TCP throughput in LANs

Pravin Bhagwat, Partha Bhattacharya, Arvind Krishma, Satish K. Tripathi  
March 1997 **Wireless Networks**, Volume 3 Issue 1

**Publisher:** Kluwer Academic Publishers

Full text available:  [pdf\(541.97 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [citations](#), [index terms](#)


In recent years, a variety of mobile computers equipped with wireless communication devices have become popular. These computers use applications and protocols developed for wired desktop hosts, to communicate over wireless channels. In these networks, packets transmitted on wireless channels are often subject to buffer overflow and cause back to back packet losses. In this paper we study the effect of buffer overflow error recovery mechanisms employed in wireless MAC ...

**19** ATM Architectures Using Optical Technology: An Overview of Switching and Multiplexing

M. Guizani


July 1997 **International Journal of Network Management**, Volume 7 Issue 1

**Publisher:** John Wiley & Sons, Inc.

Full text available:  [pdf\(525.89 KB\)](#) Additional Information: [full citation](#), [abstracts](#), [index terms](#)

This overview presents recent studies on photonic switches and discusses different types, such as space-division switches, free-space switches, time-division wavelength division switches, and frequency division switches. The architectural applications of these switches are also discussed. © 1997 John Wiley & Sons, Inc.


**20** An extensible probe architecture for network protocol performance measurement

 G. Robert Malan, Farnam Jahanian



October 1998 **ACM SIGCOMM Computer Communication Review**, P  
**ACM SIGCOMM '98 conference on Applications, techn**  
**architectures, and protocols for computer communication**  
Volume 28 Issue 4

**Publisher:** ACM Press

Full text available:  [pdf\(1.83 MB\)](#) Additional Information: [full citation](#), [abst](#)  
[citations](#), [index ter](#)

This paper describes the architecture and implementation of Windmill, a protocol performance measurement tool. Windmill enables experimenter broad range of protocol performance metrics by both reconstructing appl network protocols and exposing the underlying protocol layers' events. V three functional components: a dynamically compiled Windmill Protoco of abstract protocol modules, and an extensible experiment e ...




**Keywords:** online analysis, packet filter, passive measurement, protocol

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**IEE JNL** IEE Journal or Magazine

**IEEE CNF** IEEE Conference Proceeding

**IEE CNF** IEE Conference Proceeding

**IEEE STD** IEEE Standard

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**IEEE STD** IEEE Standard

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... EMMA: Extensible **MultiModal**  
Annotation Markup Language ...  
SDMI Portable **Device** Specification  
— Part 1, Version 1.0 · SDP: **Session**  
Description Protocol ...  
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... EMMA (Extensible  
**Multimodal** Annotation  
Language): emma, emmareqs0.9  
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### W3C Multimodal Interaction Framework

In such a scenario the user has to **switch** between modes to experience  
multiple ... For **multimodal** applications running across multiple **devices**, the  
**session** ...

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### W3C Ubiquitous Web Workshop - Call for Participation

The **Multimodal** Architecture and Interfaces describes a way to  
couple user ... **switch** between **devices** whilst continuing to access  
the same applications ...

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### **Multimodal applications**

A distributed **multimodal** framework involves multiple **devices** and servers. The **Session** Initiation Protocol (SIP) is emerging as the preferred choice for ...

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Application mobility will allow users to seamlessly **switch** between **devices** whilst ... Context Interfaces, **Device** Descriptions, **Multimodal** Architecture, etc. ...

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**Multimodal** Interfaces in Mobile **Devices** – The MONA Project. Hermann Anegg, Georg Niklfeld, ... related to registered users, currently active **sessions** ...

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### **[PDF] Multimodal Virtual Reality Versus Printed Medium in Visualization ...**

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The **multimodal** VR. interface consists of a force feedback **device** (SensAble ... **switch**. On the single click, a bar's height on the graph will. be read out. ...

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clicking the **switch** on the probe of the PHANToM to select. the response that reflected their roughness judgment for. each trial. A training **session** ...

[www.dcs.gla.ac.uk/~stephen/papers/Eurohaptics2001\\_mcgee.pdf](http://www.dcs.gla.ac.uk/~stephen/papers/Eurohaptics2001_mcgee.pdf) - [Similar pages](#)

Look Ma Bell, No Hands! - VoiceXML, X+V, and the Mobile **Device** ...

This type of interaction, in which the user has more than one means of accessing data in his or her **device**, is sometimes called **multimodal** interaction. ...

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multimodal switch device session identifier

1005

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S Steglich, R Popescu-Zeletin - Multimedia and Expo, 2001. ICME 2001. IEEE International ..., 2001 - choices.cs.uiuc.edu

... Instead, he can **switch** to any other terminal ... the future challenge will be **multi-modal** user interfaces ... to available input and output **devices**, their suitability ...

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[Casablanca: designing social communication devices for the home - group of 15 »](#)

D Hindus, SD Mainwaring, N Leduc, AE Hagström, O ... - Proceedings of the SIGCHI conference on Human factors in ..., 2001 - portal.acm.org

... a part of – you can **switch** between groups ... most visible parts of these **devices** were implicitly ... The media-rich, **multimodal**, high-bandwidth connectivity that we ...

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[ATLAS: A generic software platform for speech technology based applications - group of 6 »](#)

H Melin - TMH-QPRS, Quarterly Progress and Status Report, 2001 - speech.kth.se

... methods can handle **multi-modal** media output **devices**, such ... telephony **device**, desktop audio **device**, and audio ... creating multiple TTS engines and **switch** between them ...

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[Towards Context Aware Computing: Experiences and](#)



Lessons - group of 6 »

A Smailagic, DP Siewiorek, J Anhalt, F Gemperle, D ... -  
IEEE Journal on Intelligent Systems, 2001 - cs.cmu.edu  
... agent, location awareness, **multi-modal** user interface ...  
stop their current activity,  
**switch** to the ... request includes user **identification** and  
**device identification**. ...

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A coordination framework and architecture for internet groupware - group of 8 »

HP Dommel, JJ Garcia-Luna-Aceves - Journal of Network and Computer Applications, 2000 - sts.scu.edu  
... Multimedia collaborative systems use a polymorphic or **multimodal** mix of ... where Rid  
is a unique resource **identifier** owned by user Uid within **session** Sid. ...

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Research in multimedia and **multimodal** parsing and generation - group of 3 »

MT Maybury - Artificial Intelligence Review, 1995 - Springer  
... techniques for building multimedia and **multimodal** interfaces, that is ... modal references  
(eg, 'the red **switch** at the ... to tailor the design to the output **device**. ...

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**[BOOK]** Cooperative **Multimodal** Communication

HC Bunt, RJ Beun - 2001 - Springer

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From unified messaging towards I-centric services for the virtualhome environment

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L1	2366	stor\$3 adj session	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:00
L2	1	stor\$3 adj session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:40
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L4	1	370/???ccls. and stor\$3 adj session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:45
L5	6	370/???ccls. and session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:46
L6	66	370/???ccls. and (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:46
L7	60	I6 not I5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:52
L8	2214	709/201.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:55
L9	893	709/207.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:52

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L10	1797	709/228.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:52
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L19	0	709/207.ccls. and session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:56

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L24	1	455/558.ccls. and session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 10:52
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L26	2	717/105.ccls. and session same (multimodal or "multi-modal" or "multi modal")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/18 09:59
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S1	368	717/100.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/02/17 16:32
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S4	73	((multi-modal) or ( multi-channel) ) near3 subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:55
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S7	46	(graphic\$4 or visual\$2 or icon\$6) near3 (develop\$4 or creat\$3 ) same (data-min\$3 or spy or spyware or datamin\$3 or ( (monitor\$3 or track\$3) near2 (subscriber or user or client ) ) ) and (session or transaction )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/02/17 16:39
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S10	5	S7 and S8 and S9	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/02/17 16:44
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S14	1659	(program\$4 near3 develop\$4 ) and (subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 17:12
S15	154	(program\$4 near3 develop\$4 )same (subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 16:52
S16	5	(program\$4 near3 develop\$4 )same plurality near5 (subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 16:53
S17	0	sesion same plurality near5 (subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 16:54
S18	228	session same plurality near5 (subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 16:54
S19	78	session same plurality near5 (subscriber) and (gui or ui or interface) and (visual\$2 or graphical\$2 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 17:07
S20	23	session same plurality near5 (subscriber) and (gui or ui or interface) and (visual\$2 or graphical\$2 ) and (device near3 type)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 16:55
S21	0	("6834195").URPN.	USPAT	OR	OFF	2005/02/17 16:58



## EAST Search History

S22	9	("20010044310"   "20030006913"   "20030060211"   "6449485"   "6529728"   "6580914"   "6608556"   "6611687"   "6677894").PN. OR ("6834195").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/02/17 17:04
S23	0	((multi-modal) or ( multi-channel ) near3 subscriber and (resum\$3 near3 session)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/17 17:07
S24	510	gam\$3 and session same ( resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 08:54
S25	1132610	sequenc\$3 or "out of sequence" and (optimi\$3 or personal\$3 or custom\$7) near3 (content or page or display)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:21
S26	371	S24 and S25	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:23
S27	88	S24 and S25 and detect\$3 near3 (device or peripheral or hardware or type)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:23
S28	171	S24 and S25 and (template or framework) and (xml or ml or markup or html or sgml )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:25
S29	57	S27 and S28	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:25
S30	0	gam\$3 near5 session near5 ( resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:43

## EAST Search History

S31	0	gam\$3 near5 session same ( continu\$5 or resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:45
S32	2	(gam\$3 near5 session ) same ( continu\$5 or resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (user or subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:44
S33	0	("6577733").URPN.	USPAT	OR	OFF	2005/02/22 11:44
S34	229	session same ( continu\$5 or resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:45
S35	93	session near5 ( continu\$5 or resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 11:53
S36	25	session near5 ( continu\$5 or resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal ) and (id or identifier or unique\$2) and detect\$3 near3 (device or hardware or peripheral) and (journal\$3 or record\$3 or log\$4) same (disconnect\$3 or reconnect\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 14:39

## EAST Search History

S37	1	"6546425".pn. and resum\$5 and (id or identifier or unique)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 14:39
S38	1	"6546425".pn. and resum\$5 and (id or identifier or unique) and (gui or ui or (user adj interface))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:51
S39	3353	(develop\$4 or creat\$3 or generat\$3) near3 (graphical\$2 or visual\$2 or icon\$6) near3 (program or application or module )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:57
S40	2954	(develop\$4 or creat\$3 or generat\$3) near3 (graphical\$2 or visual\$2 or icon\$6) near3 (program or application )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:54
S41	2224	(graphic\$4 or visual\$2 or icon\$6) near3 (develop\$4 or creat\$3 ) and (data-min\$3 or spy or spyware or datamin\$3 or ( (monitor\$3 or track\$3) near2 (subscriber or user or client ) ) )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/02/22 16:56
S42	73	((multi-modal) or ( multi-channel) ) near3 subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:55
S43	1	S39 and S42	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:55
S44	34	(graphic\$4 or visual\$2 or icon\$6) near3 (develop\$4 or creat\$3 ) and (data-min\$3 or spy or spyware or datamin\$3 or ( (monitor\$3 or track\$3) near2 (subscriber or user or client ) ) ) and (plurality near3 subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/02/22 16:57
S45	319	(develop\$4 or creat\$3 or generat\$3) near3 (graphical\$2 or visual\$2 or icon\$6) near3 (program or application or module ) and 717/1??ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:57

## EAST Search History

S46	18	(develop\$4 or creat\$3 or generat\$3) near3 (graphical\$2 or visual\$2 or icon\$6) near3 (program or application or module ) and 717/1??ccls. and subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 16:57
S47	17	("5974252").URPN.	USPAT	OR	OFF	2005/02/22 17:01
S48	0	("5974252").URPN. and 717/109.ccls.	USPAT	OR	OFF	2005/02/22 17:01
S49	5	(program\$4 near3 develop\$4 ) and (subscriber) and 717/109.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/22 17:13
S50	0	(graphic\$4 or visual\$2 or icon\$6) near3 (develop\$4 or creat\$3 ) and detect\$3 near5 "out of sequence" near5 request	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:53
S51	0	( detect\$3 near5 "out of sequence") near5 request same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:53
S52	0	( detect\$3 near5 "out of sequence") same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:54
S53	0	( "out of sequence") same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:54
S54	3017	request near5 (count\$3 or number) same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:55
S55	28	(monitor\$3 or track\$3) near3 (request near5 (count\$3 or number) ) same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 07:56
S56	28	(monitor\$3 or track\$3) near3 (request near5 (count\$3 or number) ) same subscriber	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 08:10

## EAST Search History

S57	413	subscriber and (generat\$3 or produc\$3 or output\$4 ) near3 (content or display or web or page or output) near3 (personalized or optimized or custom\$7)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 08:12
S58	273	subscriber and (generat\$3 or produc\$3 or output\$4 ) near3 (presentation or content or display or web or page or output) near3 (personalized or optimized or custom\$7) and parameter	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 08:14
S59	91	subscriber and (generat\$3 or produc\$3 or output\$4 ) near3 (format\$4 or presentation or content or display or web or page or output) near3 (personalized or optimized or custom\$7) and parameter and ("data min\$3" or (monitor\$3 near3 usage) or spy or spyware or cookie)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 08:54
S60	98	("5349678"   "5377326"   "5392390"   "5410543"   "5426594"   "5666530"   "5666553"   "5673322"   "5684828"   "5684990"   "5694546"   "5727129"   "5727159"   "5727202"   "5732074"   "5740364"   "5754774"   "5768511"   "5790977"   "5794259"   "5799063"   "5802292"   "5805807"   "5809242"   "5813007"   "5832489"   "5850517"   "5862339"   "5862346"   "5864676"   "5873100"   "5877766"   "5881234"   "5884323"   "5890158"   "5895471"   "5896502"   "5906657"   "5918013"   "5918237"   "5922045"   "5928329"   "5937163"   "5943676"   "5946697"   "5948066"   "5953392"   "5954795"   "5961601"   "5961602"   "5974238"   "5978828"   "5978833"   "5978842"   "5987454"   "5987476"   "5987499"   "5991800"   "6000000"   "6006231"   "6006274"   "6009462"   "6012083"   "6021433"   "6023698"   "6023708"   "6026474"   "6029175"   "6029195"   "6032162"   "6035324"   "6041360"   "6049821"   "6052735"   "6058416"   "6061718"   "6065051"   "6065059"   "6070184"   "6076109"   "6085192"   "6119167"   "6131096"   "6148330"   "6161146"   "6167255"   "6195692"   "6209027"   "6209111"   "6226650"). PN. OR ("6341316").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/02/23 08:26

## EAST Search History

S61	1880	("5349678"   "5377326"   "5392390"   "5410543"   "5426594"   "5666530"   "5666553"   "5673322"   "5684828"   "5684990"   "5694546"   "5727129"   "5727159"   "5727202"   "5732074"   "5740364"   "5754774"   "5768511"   "5790977"   "5794259"   "5799063"   "5802292"   "5805807"   "5809242"   "5813007"   "5832489"   "5850517"   "5862339"   "5862346"   "5864676"   "5873100"   "5877766"   "5881234"   "5884323"   "5890158"   "5895471"   "5896502"   "5906657"   "5918013"   "5918237"   "5922045"   "5928329"   "5937163"   "5943676"   "5946697"   "5948066"   "5953392"   "5954795"   "5961601"   "5961602"   "5974238"   "5978828"   "5978833"   "5978842"   "5987454"   "5987476"   "5987499"   "5991800"   "6000000"   "6006231"   "6006274"   "6009462"   "6012083"   "6021433"   ("6023698"   "6023708"   "6026474"   "6029175"   "6029195"   "6032162"   "6035324"   "6041360"   "6049821"   "6052735"   "6058416"   "6061718"   "6065051"   "6065059"   "6070184"   "6076109"   "6085192"   "6119167"   "6131096"   "6148330"   "6161146"   "6167255"   "6195692"   "6209027"   "6209111"   "6226650"). PN. OR ("6341316").URPN.) and (graphical\$2 or visual\$2 or icon\$6 )	US-PGPUB; USPAT; USOCR	OR	OFF	2005/02/23 08:28
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## EAST Search History

S62	78	("5349678"   "5377326"   "5392390"   "5410543"   "5426594"   "5666530"   "5666553"   "5673322"   "5684828"   "5684990"   "5694546"   "5727129"   "5727159"   "5727202"   "5732074"   "5740364"   "5754774"   "5768511"   "5790977"   "5794259"   "5799063"   "5802292"   "5805807"   "5809242"   "5813007"   "5832489"   "5850517"   "5862339"   "5862346"   "5864676"   "5873100"   "5877766"   "5881234"   "5884323"   "5890158"   "5895471"   "5896502"   "5906657"   "5918013"   "5918237"   "5922045"   "5928329"   "5937163"   "5943676"   "5946697"   "5948066"   "5953392"   "5954795"   "5961601"   "5961602"   "5974238"   "5978828"   "5978833"   "5978842"   "5987454"   "5987476"   "5987499"   "5991800"   "6000000"   "6006231"   "6006274"   "6009462"   "6012083"   "6021433"   ("6023698"   "6023708"   "6026474"   "6029175"   "6029195"   "6032162"   "6035324"   "6041360"   "6049821"   "6052735"   "6058416"   "6061718"   "6065051"   "6065059"   "6070184"   "6076109"   "6085192"   "6119167"   "6131096"   "6148330"   "6161146"   "6167255"   "6195692"   "6209027"   "6209111"   "6226650"). PN. OR ("6341316").URPN.) and (graphical\$2 or visual\$2 or icon\$6 ) near3 develop\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2005/02/23 08:29
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## EAST Search History

S63	4	((("5349678"   "5377326"   "5392390"   "5410543"   "5426594"   "5666530"   "5666553"   "5673322"   "5684828"   "5684990"   "5694546"   "5727129"   "5727159"   "5727202"   "5732074"   "5740364"   "5754774"   "5768511"   "5790977"   "5794259"   "5799063"   "5802292"   "5805807"   "5809242"   "5813007"   "5832489"   "5850517"   "5862339"   "5862346"   "5864676"   "5873100"   "5877766"   "5881234"   "5884323"   "5890158"   "5895471"   "5896502"   "5906657"   "5918013"   "5918237"   "5922045"   "5928329"   "5937163"   "5943676"   "5946697"   "5948066"   "5953392"   "5954795"   "5961601"   "5961602"   "5974238"   "5978828"   "5978833"   "5978842"   "5987454"   "5987476"   "5987499"   "5991800"   "6000000"   "6006231"   "6006274"   "6009462"   "6012083"   "6021433"   "6023698"   "6023708"   "6026474"   "6029175"   "6029195"   "6032162"   "6035324"   "6041360"   "6049821"   "6052735"   "6058416"   "6061718"   "6065051"   "6065059"   "6070184"   "6076109"   "6085192"   "6119167"   "6131096"   "6148330"   "6161146"   "6167255"   "6195692"   "6209027"   "6209111"   "6226650"). PN. OR ("6341316").URPN.) and (graphical\$2 or visual\$2 or icon\$6 ) near3 develop\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2005/02/23 08:29
S64	61	subscriber and (format\$4 or presentation or content or display or web or page or output) near3 (personalized or optimized or custom\$7) same ( (html or ml or xml or markup) and (template or framework))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 09:04
S65	2	"6049664".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:28
S66	2	"6553412".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:33



## EAST Search History

S67	2397	709/227.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:34
S68	5105	709/203.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:35
S69	2879	709/219.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:34
S70	7	709/227.ccls. and S57	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:34
S71	17	709/203.ccls. and S57	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/02/23 10:35
S72	158	( (wireless or cellular or mobile) and ( voice or pstn ) and (wire\$2 or line or internet or network\$3 ) ) near3 ( access\$3 or link\$3 or connect\$3 or via) near3 (application or content or program or module or site or page or web )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 14:56
S73	8	( (wireless or cellular or mobile or handheld or pda ) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 ) ) near3 ( access\$3 or link\$3 or connect\$3 or via) near3 (application or content or program or module or site or page or web ) and ((anytime or anywhere or push or pull of offline) near2 access\$3 ) and ( "access terminal" or "web browser" or browser)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 14:45

## EAST Search History

S74	9	( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) ) near3 ( access\$3 or link\$3 or connect\$3 or via) near3 (application or content or program or module or site or page or web ) and ((anytime or anywhere or push or pull of offline) near2 access\$3 ) and ( "access terminal" or "web browser" or browser)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 14:54
S75	299	( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) ) same detect\$3 near3 ( client or device)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 14:56
S76	299	( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) ) same detect\$3 near3 ( client or device)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/31 08:38
S77	2	S72 and S76	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 14:57
S78	8	("6577733" "6546425" "6049644" ).pn. or "20030126584"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/29 15:09
S79	242	remote\$2 near3 "access application"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/29 15:10
S80	2	S72 and S79	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/29 15:10
S81	246	remote\$2 near3 access\$3 near3 modes	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/29 15:11

## EAST Search History

S82	0	S72 and S81	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/29 15:11
S83	75	remote\$2 near3 access\$3 near3 modes and ( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/29 15:11
S84	158	"anywhere access"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/30 17:16
S85	2	"anywhere access" and ( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) ) same detect\$3 near3 ( client or device)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/30 17:17
S86	28	(anywhere near3 access\$3 ) and ( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" ) ) same detect\$3 near3 ( client or device)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/31 07:39
S87	1	"6938080".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/31 07:39
S88	16	("5784463"   "5964891"   "5970473"   "5991746"   "6006266"   "6049877"   "6158011"   "6233565"   "6304578"   "6324267"   "6341127"   "6341353"   "6363434"   "6470378"   "6516416"   "6563793").PN. OR ("6938080").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/31 08:04
S89	16	( ("5784463"   "5964891"   "5970473"   "5991746"   "6006266"   "6049877"   "6158011"   "6233565"   "6304578"   "6324267"   "6341127"   "6341353"   "6363434"   "6470378"   "6516416"   "6563793").PN. OR ("6938080").URPN. ) and (lan internet network wireless "carrier wave" phone pda voice speech cellular mobile handheld wap smart )	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/31 08:09

## EAST Search History

S90	3254	( (wireless or cellular or mobile or handheld or pda or wap or smart) and ( voice or speech or pstn or phone or videophone ) and (wire\$2 or line or internet or network\$3 or "tcp/ip" or lan or wan ) ) same (plurality or multi\$3 or multi-channel or "two or more") near2 (link or connection or protocol or communication )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 08:53
S91	585	gam\$3 and session same ( resum\$3 or resumption or continu\$5 or reinitiat\$3 ) and (id or identifier or unique ) same (subscriber or client or multi-channel or multi-modal or multichannel or multimodal )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 08:55
S92	26	S90 and S91 .	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 09:07
S93	828	execut\$3 near3 (multiple or multi or plurality) near2 (connection or link or access or channel)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 09:09
S94	1	execut\$3 near3 (multiple or multi or plurality or "one or more" or "two or more") near2 (connection or link or access or channel) same ((plurality or multiple or "one or more" or "two or more") adj subscriber)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 09:26
S95	47340	(markup or "mark-up" or ml or xml or sgml or html) and (associat\$3 or map\$4 or relat\$3 or identify or identifi\$4 or specific or specify ) adj (device or peripheral or type or computer or pda or laptop or cellular or wireless )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 09:36
S96	1457	(associat\$3 or map\$4 or relat\$3 or identify or identifi\$4 or specific or specify ) adj (markup or "mark-up" or ml or xml or sgml or html) and (associat\$3 or map\$4 or relat\$3 or identify or identifi\$4 or specific or specify ) adj (device or peripheral or type or computer or pda or laptop or cellular or wireless )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 09:37

## EAST Search History

S97	5	S93 and S96	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 14:40
S98	1	"20020138617" and execut\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 14:41
S99	1	"20020138617" and subscribers	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 14:42
S10 0	0	"20020138617" and subscription	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 14:43
S10 1	1	"20020138617" and dsl	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 15:01
S10 2	1	"20020138617" and (id or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/31 15:01
S10 3	2	"20020138617" and (id or identification or identifier)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 07:15
S10 4	1	"20020138617" and (billing or charges )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 08:12
S10 5	1	"20020138617" and (new )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 08:15
S10 6	0	"20020138617" and (start\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 08:15

## EAST Search History

S10 7	0	"20020138617" and (begin\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 11:09
S10 8	1913	709/225.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 11:10
S10 9	193	709/225.ccls. and session and device and ( markup or xml or ml) and (internet or desktop or wireless or cellular or phone or smart or telephone or pda or mobile or pager or laptop or voice)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 11:12
S11 0	261	709/225.ccls. and (session or transaction) and device and ( markup or xml or ml) and (internet or desktop or wireless or cellular or phone or smart or telephone or pda or mobile or pager or laptop or voice)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 11:13
S11 1	5	709/225.ccls. and (session or transaction) and (detect\$3 near2 device ) and (genera\$3 near2 (content or output))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 11:13
S11 2	578	717/124.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/01 14:33
S11 3	223	717/125.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/01 14:33
S11 4	162	717/125.ccls. and (remote\$2 or network or distributed)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/01 14:34
S11 5	157	717/125.ccls. and (remote\$2 or network or distributed) and (component or module or object or bean or ejb)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 14:34

## EAST Search History

S11 6	414	717/124.ccls. and (remote\$2 or network or distributed)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/01 14:34
S11 7	400	717/124.ccls. and (remote\$2 or network or distributed) and (component or module or object or bean or ejb)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 14:37
S11 8	182	717/124.ccls. and (remote\$2 or network or distributed) and (object or component or module or object or bean or ejb) and (record\$3 or log\$4 or analyz\$3 ) and performance	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 14:35
S11 9	48	717/124.ccls. and (remote\$2 or network or distributed) near2 test\$3 and (component or module or object or bean or ejb)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/01 14:37
S12 0	1830	(multimodal or "multi-modal" or "multi modal") and (cml or xml or ml)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/22 10:07
S12 1	77	(multimodal or "multi-modal" or "multi modal") and (cml or xml or ml) and (device near5 specific)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/22 11:02
S12 2	63	(multimodal or "multi-modal" or "multi modal") and (cml or xml or ml) and (device near5 specific) and (select\$5 or enabl\$4 or disabl\$4 or (case near3 switch) ) same (application or framework or template )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/22 11:10
S12 3	68	application same ( enabl\$4 near3 ( specific or tailor\$3) near3 (output or presentation or display or view)) )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/03/22 11:20
S12 4	9169	application same ( (specific\$4 or tailor\$3) near3 (output or presentation or display or view))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/22 11:21

## EAST Search History

S12 5	534	application same ( (specific\$4 or tailor\$3) near3 (output or presentation or display or view)) and "device type"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/22 11:21
S12 6	2	"20020138617"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:03
S12 7	2	"20020138617"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:03
S12 8	1	"20020138617" and (stor\$3 near5 session)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:07
S12 9	1	"20020138617" and session	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:09
S13 0	5717	subscriber same (disconnect\$3 or drop\$4 ) and (stor\$3 or session or thread)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:13
S13 1	1634	subscriber same (disconnect\$3 or drop\$4 ) same (stor\$3 or session or thread)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:13
S13 2	533	subscriber near5 (disconnect\$3 or drop\$4 ) same (stor\$3 or session or thread)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:14
S13 3	12	subscriber near5 (disconnect\$3 or drop\$4 ) same stor\$3 same ( session or thread)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:34
S13 4	125	(subscriber or session) near5 (disconnect\$3 or drop\$4 ) and (subscriber or session) near5 (reconnect\$3 ) and stor\$3 same ( session or thread)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 13:36



## EAST Search History

S13 5	8	(subscriber or session) near5 (disconnect\$3 or drop\$4 ) and (subscriber or session) near5 (reconnect\$3 ) and stor\$3 same ( session or thread) and (thread near3 (id or identifier or identity or identification) )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 14:20
S13 6	8	(subscriber or session) near5 (disconnect\$3 or drop\$4 ) and (subscriber or session) near5 (reconnect\$3 ) and stor\$3 same ( session or thread) and (thread near3 (id or identifier or identity or identification) ) and (sequenc\$3 or order\$3 or fragment\$5 or reassembl\$3 or "re-assembling" )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 14:22
S13 7	8	(subscriber or session) near5 (disconnect\$3 or drop\$4 ) and (subscriber or session) near5 (reconnect\$3 ) and stor\$3 same ( session or thread) and (thread near3 (id or identifier or identity or identification) ) and (sequenc\$3 or order\$3 or fragment\$5 or reassembl\$3 or "re-assembling" or assembl\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/27 14:38
S13 8	2209	device near5 (plurality or multiple or second or alternat\$3 or different ) and session near5 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 ) and (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/06 14:01
S13 9	349	device near3 (plurality or multiple or second or alternat\$3 or different ) and session near3 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 ) same (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/06 14:02
S14 0	0	(multi-channel or multichannel) same device near3 (plurality or multiple or second or alternat\$3 or different ) and session near3 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 ) same (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/06 14:03

## EAST Search History

S14 1	18	(multi-channel or multichannel or "multi channel" or modal or multimodal or "multi modal") and device near3 (plurality or multiple or second or alternat\$3 or different ) and session near3 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 ) same (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/07 08:16
S14 2	7	("6912581" "6807529" ).pn. "20030187944"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/06 16:57
S14 3	0	("2003/0187944").URPN.	USPAT	OR	OFF	2006/09/06 17:01
S14 4	6	("6011909"   "6076108"   "6078948"   "6088728"   "6519643"   "6694008"). PN. OR ("6912581").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/06 17:02
S14 5	7	("20020128845"   "20030046316"   "20030126330"   "5640590"   "6324511"   "6570555").PN. OR ("6807529").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/06 17:13
S14 7	2211	709/201.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/06 17:14
S14 8	889	709/207.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/06 17:17
S14 9	30	("5960432" "5937163" "6128655" "6408360" "6477565" "6584548" "5603034" "5850548" "5887172" "5991535" "6073163" "6324681" "6757709" "6286029" "6735741").pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/07 07:59
S15 0	20	("6757709" "6286029" "6477565" "6735741" "6892226" "5933811" "5850433" "5572643" ).pn. "20020002569" "20020124055"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/09/07 07:59

## EAST Search History

S15 1	21	(multi-channel or multichannel or "multi channel" or modal or multimodal or "multi modal") and (device or (display near3 interface)) near3 (plurality or multiple or second or alternat\$3 or different ) and session near3 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 or reset\$4 ) same (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/07 08:15
S15 2	18	(multi-channel or multichannel or "multi channel" or modal or multimodal or "multi modal") and device near3 (plurality or multiple or second or alternat\$3 or different ) and session near3 (reestablish\$4 or reconnect\$3 or reconstruct\$3 or reenact\$3 or continu\$5 ) same (id or identifier or unique or key or identification)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/07 08:17
S15 3	3	S151 not S152	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/09/07 08:17